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NOTES ON SOME NEW AND INTERESTING BUTTERFLIES FROM MANIPUR AND THE NAGA HILLS.

BY

Lieut.-Col. H. C. Tytler, 17th Infantry.

Part I.

Since writing my notes on "Butterflies from the Naga Hills," published in the Journal of October 31st, 1911, and March 31st, 1912, I have had the good fortune to spend three years at Imphal in the Manipur State, and have endeavoured, with the aid of a large staff of Native collectors, numbering at one time as many as eleven, to systematically work portions of the surrounding hills which are so little known entomologically and also parts of the Naga Hills in the vicinity of Kohima. It is not my intention in these notes to give a full account of the results obtained but only to mention those forms which appear to be new or undescribed, or are otherwise interesting.

I also take this opportunity to describe a few new and interesting forms taken by Captain Porter on the Dihang River in the Abor Hills.

For convenience sake, I have divided the Manipur State into four portions :—

(1) The Manipur Valley, 2,600 feet, which is extensively cultivated with rice and practically devoid of all forest.

(2) The Western Manipur Hills, which lie between the Manipur Valley and Cachar. These hills are covered with dense forest and are crossed by the Cachar Road, a bridle path, leading from Imphal to Silchar in the Cachar Valley. The highest peak is Kabru, 8,400 feet, overlooking the northern end of the Manipur Valley.

(3) The Eastern Manipur Hills, which lie between the Manipur Valley and Burma. These hills are thickly wooded and are crossed towards the south by the Burma Road, a bridle path, leading from Imphal to Tamu in Burma. Towards the north the Ukral Road leads to Ukral, a mission station, about 50 miles from Imphal. Near Ukral, Suroifui is the highest peak being over 9,000 feet; in the vicinity of the Burma Road the hills are much lower, the highest probably not exceeding 6,000 feet.

(4) The Northern Manipur Hills, which adjoin the Naga Hills and connect the Western and Eastern Manipur Hills, are crossed by the main Government cart-road leading from Imphal to Kohima in the Naga Hills. Above Maothana, close to the Naga Hills border, the southern spurs of

Japho Peak, which is just within the Naga Hills, run up to over 9,000 feet.

The parts of Manipur chiefly worked are :—

(1) Imphal itself and the small low hills in its immediate vicinity.
(2) Saitu, a village about 20 miles from Imphal, at the northern end of the valley and situated on the eastern slopes of the Western Manipur Hills.
(3) Kabru Peak, 8,400 feet, situated immediately above Saitu village.
(4) The Irang and Lengba Rivers on the Cachar Road, Western Manipur Hills, about 50 and 60 miles respectively from Imphal.
(5) The country near Sebong, close to the Burma border on the Burma Road, Eastern Manipur Hills, about 64 miles from Imphal.
(6) Suroi village and Suroifui Peak, 9,000 feet, immediately above it about 65 miles from Imphal.

The country worked in the Naga Hills was practically the same as before.

The hill tops, both in Manipur and in the Naga Hills, are very inaccessible. There are practically no paths leading to them through the dense forest, and the Nagas and Manipuris scarcely ever visit them. It was with the greatest difficulty I could induce my Native collectors to go up to them.

Away in the jungles, 134 miles from the nearest Railway Station, the collector is at some disadvantage in properly determining doubtful forms, for want of access to many necessary books of reference and to a good museum. In these notes only those forms have been considered to be new, of which I can find no mention in any of the following books :—

(1) de Nicèville's "Butterflies of India, Burma and Ceylon."
(2) Bingham's "Butterflies," Fauna of British India.
(3) Seitz's "Macrolepidoptera of the World" as far as published.
(4) Elwes and Edward's "Revision of the Oriential Hesperiidæ."
(5) Rothschild and Jordan's Revision of the Papilios of the Eastern Hemisphere.

Since writing the above, I have spent five days at the Calcutta Museum, and together with Capt. W. H. Evans have compared all doubtful forms with specimens in the late Mr. de Nicèville's magnificent collection.

I am indebted to Capt. W. H. Evans for much valuable assistance in determining many doubtful forms. I am also much indebted to this officer and to the Bombay Natural History Society for helping me with collectors; but for their generous assistance much of the ground worked would have remained untouched.

Family—NYMPHALIDÆ.

Sub-family—*Satyrinæ*.

Parargе gafuri, n. sp. (Pl. I, Fig. 1.)

Male and female. *Upperside* : ochreous yellow. Forewing : rather fuscous near base and along costa ; apex and terminal border black, the latter tending to form broad contiguous lunules in spaces 1-4, anterior to which is a subterminal row of diffuse blackish patches ; discocellulars marked with darker colour ; a subapical black ocellus with a white centre in space 5 ; termen with a fine anteciliary black line inwardly bordered by a broader line of the ground colour. Hindwing : rather fuscous along dorsum becoming more pronounced near tornus ; subterminal area paler, inwardly defined by a dark diffuse line, outwardly projected at vein 4, and outwardly bordered by a broad dark row of contiguous spots, followed by a narrow line of the ground colour and a still narrower black anteciliary line ; on the subterminal pale area are five black spots in spaces 1, 2, 3, 5 and 6, the last three spots blind and subequal, the one in space 2 the largest and white centred, and the one in space 1 the smallest and also white centred.

Underside: Both wings clearer yellow than above. Forewing : discocellular marked with darker yellow ; a subterminal pale silvery lilac band, ending in a black ocellus ringed with yellow and centred with bluish-white in space 5, bordered inwardly and outwardly by darker yellow ; the inner border recurving sharply back at right angles in space 4 till it reaches vein 9 ; the outer border followed by a narrow pale lilac line, a still narrower black line, a broader line of the ground colour and lastly by a very narrow anteciliary thread. Hindwing : discocellulars marked with darker yellow ; a subterminal pale silvery lilac band with black spots ringed with yellow and centred with white in spaces 1, 2 and 6 ; the tornal spot small, the other two large and subequal, this band inwardly bordered by a dark yellow line which projects outwardly at vein 4 and outwardly bordered by a similarly coloured line followed by a narrow silvery lilac line, a still narrower black line, a broader line of the ground colour and lastly by a fine anteciliary line as in forewing. The *female* only differs in being somewhat paler and larger than the male.

Cilia blackish ; body brown above, white below. Antennæ : *above* blackish-ringed with white and tipped with ochreous ; *below* brownish-ochre near base turning to ochreous near club which is black.

Expanse : ♂ ♂ 2·37″—2·65″ ; ♀ ♀ 2·54″—2·82″.

It agrees with *P. cashmirensis*, Moore, in venation and in having the eyes hairy but the shape of the wings is very different. It is very like *Lethe gemina*, Leech, except for colour which is brown in the latter species. Described from a large series of males and eleven females taken at Kirbari, Naga Hills, 6,000-7,000 feet, between the end of July and beginning of October. Specimens taken in July and August were fresh and in good condition, and those in September and October were worn and damaged.

Callerebia suroia, n. sp. (Pl. I, Fig. 2 ♂).

Male and female. *Upperside* : dark velvety brown rather paler in the female. Forewing : terminal area paler and sprinkled with greyish scales ; a large bipupilled black ocellus broadly ringed with orange which is outwardly paler and bordered by a dark subterminal line. Hindwing : a subterminal obscure dark narrow line ; a single black tornal ocellus centred with white and ringed with fulvous, very often wanting in males. *Underside* : forewing : brown tinged with red in cell ; apical half of costa striated with white ;

NOTES ON SOME NEW AND INTERESTING BUTTERFLIES FROM MANIPUR AND THE NAGA HILLS.

Explanation of Plate I.

Fig. 1.—Pararge gafuri, n. sp. ♂.

,, 2.—Callerebia suroia, n. sp. ♂.

,, 3.—Apatura sordida naga, n. sp. ♂.

,, 4.—Eulepis lissainei, n. sp. ♂.

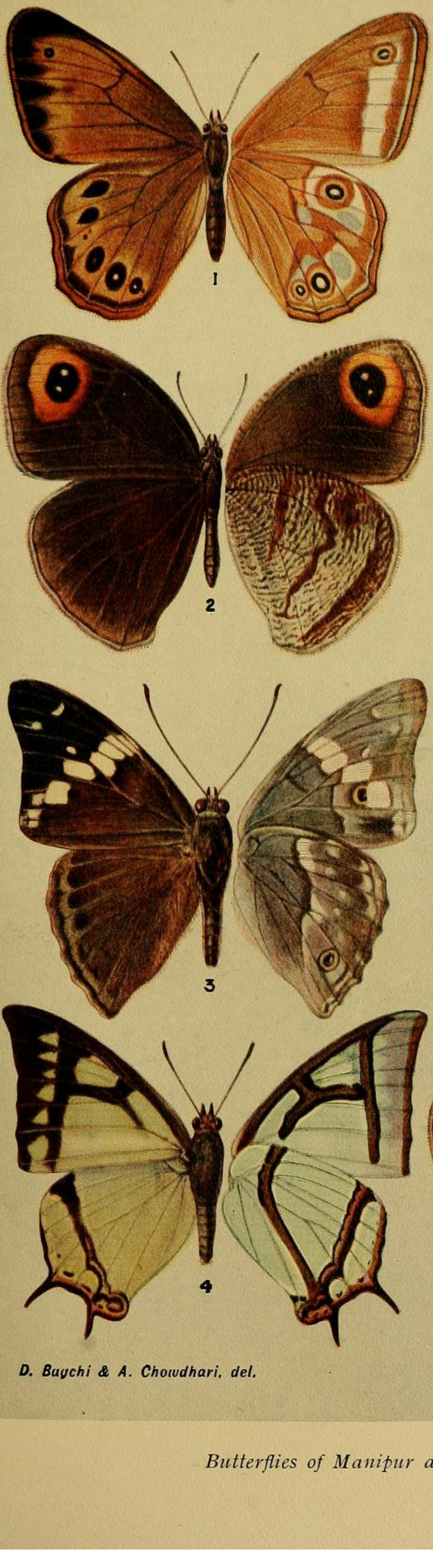
,, 5.—Lethe kanjupkula, n. sp. ♂.

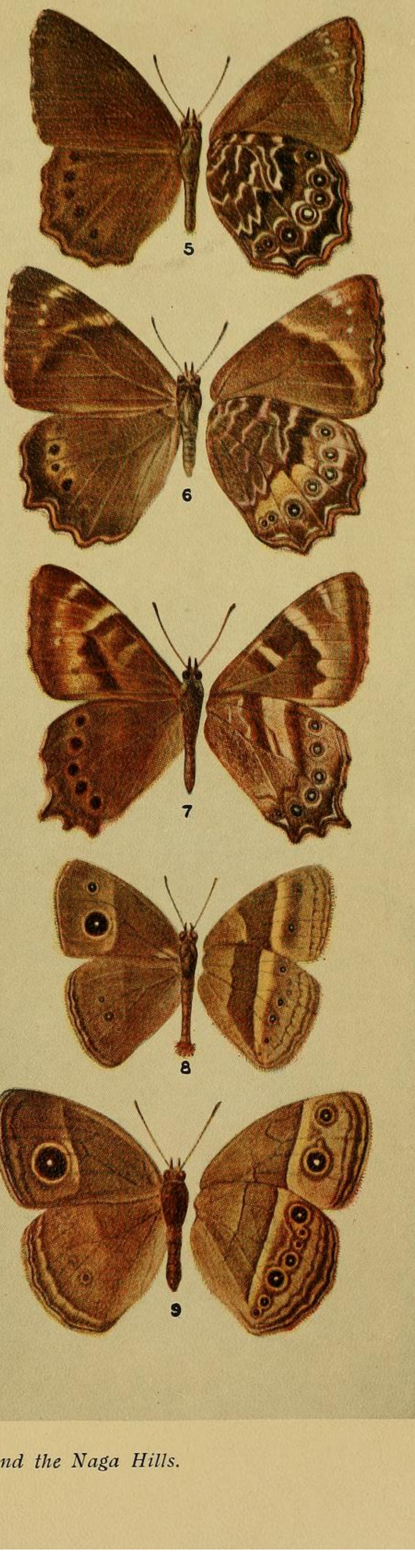
,, 6.— ,, ,, ,, ♀.

,, 7.—Lethe kabrua, n. sp. ♂.

,, 8.—Mycalesis evansii, n. sp. ♂. d. s. f.

,, 9.— ,, ,, n. sp. ♀. w. s. f.





D. Baychi & A. Chowdhari, del.

Butterflies of Manipur and the Naga Hills.

terminal area rather paler ; a large bipupilled black ocellus, broadly ringed with orange and outwardly margined with black as on upperside ; below the ocellus and on its inner margin the ground colour is somewhat darker. Hindwing : brown densely irrorated with short white strigæ which become more intense and conspicuous along the dorsum and postmedian area ; a dark reddish-brown sub-basal band followed by a median band of the same colour strongly outwardly angled at vein 5 commencing at the costa and reaching vein 1 just above the tornus ; terminal area broadly brown, faintly striated with white.

Cilia brown, inner hairs white forming a conspicuous white line along the termen.

Expanse : ♂♂ 2·2″—2·7″; ♀♀ 2·59″—2·7″; very similar in appearance to *C orixa*, Moore, from which it can be distinguished on the upperside forewing, by the very much broader orange ring round the ocellus especially on its outer edge. *Underneath* by the broader orange ring on the forewing and on the hindwing by the two very conspicuous sub-basal and median reddish-brown bands which are almost obsolete in *C. orixa* ; by the denser and more conspicuous white strigæ and by the complete absence of the tornal ocellus.

Described from four males taken near Suroi, 6,000 feet, in July by Captain Evans' and my own collectors and from nine males and seven females taken at the same place by my collectors in August. Specimens taken in July were quite fresh and those in August were worn and in bad condition.

Lethe naga, Doherty.

The *male* which has not been described only differs from the *female* in lacking the discal white band on the forewing and on the *upperside* all the ocelli are *usually* blind. In rainy-season forms the *apical* ocellus of forewing is sometimes minutely centred with white. Dry-season forms have the *two upper ocelli* on forewing sometimes centred with white and on the hindwing the ocelli in spaces 2, 4 and 5 are sometimes similarly minutely pupilled. On the *underside* the basal half of forewing and the whole of the hindwing is darker brown ; the apical half of the forewing being tinged with violet. In dry-season forms which are smaller the white band of the female is faintly indicated on the underside by the ground colour being slightly paler. *Females* have on both sides of the forewing the white band at the costal end inwardly produced towards the base ; and in the single *fresh* specimen before me all the ocelli on the upper forewing and hindwing with the exception of the costal and tornal ones of the hindwing are minutely centred with white, in three other worn females some of these white pupils are obliterated probably through wear.

Expanse : *d. s.* ♂♂ 2·74″—2·9″; *w. s.* ♂♂ 2·97″—3·23″. Capt. Evans and my collectors took several males and a few females of the wet-season form on the Burma Road, Manipur, near the Burma border at low elevations from September to December ; nearly all the specimens taken during November and December were badly worn. Dry-season forms were obtained at the same place in June.

This is a very interesting capture as I believe this species has hitherto been known only by a single female, taken by Doherty at Margherita in the Assam Valley.

It is closely related to *Lethe philemon*, Fruhstorfer, from Northern Tonkin and is probably conspecific as stated by Fruhstorfer.

Lethe serbonis naganum, n. sp.

Under the above name I propose separating the form of *L. serbonis* from the Manipur and Naga Hills from the typical form from Sikkim. It is a well marked race and differs from typical *serbonis* in being much larger, *viz.*,

3″—3·29″ against 2·5″—2·75″ as recorded by Bingham and 2·9″ as recorded by de Nicèville.

Male. *Upperside* : much darker. Forewing : the post-discal area less conspicuously paler than rest of the wing. *Underside* : much darker ; markings dark red-brown and not light red-brown as in the typical form.

Female. Very similar to the male and only differs on the *upperside* in having the post-discal dark band more conspicuous and the area beyond it paler ; the costal and preapical spots more conspicuous. *Underside* ; brighter and more golden brown.

Both sexes taken during August and September on Kabru Peak, Manipur, 7,000′ — 8,400′ and males in the Naga Hills at Kirbari, Takabama, and on the Hill above Kohima at about 7,000′ during the same months.

Although I have obtained a good series of both sexes it is by no means a common butterfly and appears to be on the wing only in August and September.

LETHE SATYAVATI, de N.

A female of the dry-season form was obtained on the Barak River, Western Manipur Hills, in April.

The ♀ type in the de Nicéville collection caught on May 18th is a *wet-season form.* The *dry-season form* differs from it on the *upperside* in being greyish-brown and not red-brown and in having the whitish terminal area much more conspicuous. *Underneath* the colour is also greyish-brown and not red-brown and the pale terminal area not so distinctly lilacine and the ocelli not so large.

This is an exceedingly interesting capture as the two type specimens, taken by Professor Wood-Mason at Sibsagar, have hitherto been the only ones recorded. The male still remains unknown.

LETHE SIDEREA, Marshall.

The *female* which according to Bingham is unknown differs somewhat from the male. *Upperside* : paler brown than the male. Forewing : cell and bases of interspaces 3, 4, 5 and 6 darker than the rest of the wing ; this dark area outwardly well defined and sharply angled at vein 4, followed by a pale brown transverse band ; a preapical row of pale spots in interspaces 4 — 6 and a diffused pale area in interspaces 7 and 8. Hindwing : the ocelli on underside showing through more or less as dark spots. *Underside.* Forewing : the dark discal area sharply defined as on upperside but continued into interspace 2 ; the transverse pale brown post-discal band as on upperside but very diffuse on outer edge, followed by a preapical row of white spots in interspaces 3 — 7, the lower spot sometimes absent ; base of interspaces 7 and 8 pale brown.

Hindwing as in male.

Expanse : ♀ ♀ 2·15″—2·23.″

Both sexes were obtained by my Native Collectors at 6,000′—8,400′ from May to October, both in the Naga Hills and in Manipur. Females were generally found higher up than the males.

It is by no means such a rare insect as I previously thought.

LETHE KANJUPKULA, n. sp. (Pl. I, Figs. 5, 6 ; ♂, ♀).

Male, *dry-season form. Upperside* : very similar to *L. siderea* in shape of wings but the colour is greenish-brown and not coppery-brown as in that species. Forewing unmarked. Hindwing four faint dark spots in interspaces 2—5. *Underside* : dark fuliginous brown. Forewing ; a faint much curved post-discal band, lighter than the ground colour, commencing at the costa just beyond apex of the cell and ending at the tornal angle. Three sub-apical dark spots with blurred whitish centres in interspaces

4—6; a fourth spot in interspace 3 indicated by a minute white dot; a whitish spot at base of interspace 7 above which is another spot in interspace 8 and below it are two spots in interspace 6 anterior to the dark subterminal spot before mentioned; a fine black terminal line inwardly defined by whitish streaks in interspaces 2—5 and outwardly defined by ochreous brown which extends to the apical area. Hindwing: the following lilacine highly irregular and broken bands crossing the basal half of wing; *viz.*, a very short basal; two short sub-basal; another just before end of cell and another just beyond the cell, broken at interspaces 2 and 3, filling the base of the former but not entering the latter; these last two bands bordered by dark brown anteriorly and posteriorly respectively and joined together by two fine lilacine lines on either side of the discocellulars; a subterminal row of six black white centred spots encircled with yellow and an outer ring of lilacine; the tornal spot bipupilled and those in interspaces 3 and 4 blurred. A terminal black line outwardly bordered by yellowish-brown and inwardly by lilacine lunules. Antennæ: *above* brown; *below* ringed with white; apex reddish.

The *wet-season male* only differs in being richer brown above and all the markings below brighter lilacine.

Female, *wet-season form*. *Upperside*: paler than male. Forewing: a postdiscal rather indistinct yellow macular band, commencing at the costa just above the apex of the cell and directed, as far as interspace 4, towards the middle of the termen and then sharply bent down towards the tornus inwardly bordered with dark brown; two pale yellow preapical spots in interspaces 4 and 5 above which are three yellowish subcostal streaks. Hindwing as in male, but spots rather more distinct and faintly encircled with dusky yellow; subterminal area darker brown; a distinct ochreous narrow terminal line. *Underside*: paler than the male. Forewing: yellow postdiscal band as on upperside but broader and much more distinct. inwardly broadly bordered with dark brown; apical area paler than in the male; subterminal spots as in male, but spot in interspace 3 placed on the postdiscal yellow macular band and so very indistinct. Hindwing as in male, but basal half irrorated with violet scales; subterminal spots more conspicuously surrounded by lilacine towards the apex; a postdiscal yellow band between the subterminal spots and the discal dark brown band, most conspicuous in interspaces 2—4; subterminal area near tornus red-brown.

Expanse: ♂ ♂ 2″—2·3″; ♀ ♀ 2·37″—2·52″. The *female* is very like that sex of *L. nicetas*; the termen is somewhat rounder and on the *upperside* of the forewing the discal macular band is not quite so conspicuous. On the hindwing the spots are rather more distinct. On the *underside* the yellow postdiscal macular band is not so broad and the basal half of the hindwing is not so densely irrorated with violet scales; the subterminal ocelli are also larger. It can always be easily distinguished from ♀ *L. nicetas* by the shape of the yellow postdiscal macular band on the forewing, above and below, which in the present form commences at the costa nearer to the apex of the cell and is directed, as far as interspace 4, towards a point on the termen nearer the apex than it is in *L. nicetas*; the shape consequently appearing very different.

It belongs to the *Sinchula* group and its nearest allies appear to be *L. siderea* and *L. nicetas*.

The type, a dry-season male, was taken at Kanjupkul on the western edge of the Manipur Valley at 6,000 ft. on 4th June; another *d. s.* male was taken on Kabru, Manipur, at 8,400 ft. during the same month and three more males at the same place in July. Nine males and five females of the wet-season form were taken in the Zulla valley, Naga Hills, at about 6,000 ft. in October and the beginning of November.

LETHE NICETAS, Hewitson.

Numerous specimens of both sexes were obtained by my native collectors on Kabru Peak, Manipur, at 8,400 ft. during May and June and again in August and September. It is double brooded. I believe it has not previously been recorded East of Sikkim.

LETHE VISRAVA, Moore.

A single wet-season male taken on the Burma Road, Manipur, in October and two dry-season males taken at the same place in June. Not previously recorded East of Bhutan I believe.

LETHE LYNCUS, de N.

A single male obtained on Suroifui, Eastern Manipur Hills, 8,000 ft. to 9,000 ft. in August which agrees exactly with a specimen in the de Nicéville collection as regards markings but which has the forewing rather more pointed and the colour underneath much browner. It may prove to be a well defined race of *L. lyncus* but I do not like to separate it on a single specimen. *L. lyncus* in Sikkim appears to be very rare and its occurrence in Manipur is interesting.

LETHE KABRUA, n. sp. (Pl. I, Fig. 7, ♂).

Very similar in appearance to *L. jalaurida*, from Sikkim, from which it differs in the following respects:—

Male. *Upperside:* forewing: similar to *L. jalaurida*, but with a conspicuous sexual brand of specialized scales from near base of vein 4 to the middle of vein 1, straight on inner edge and crenated on the outer edge between the veins. Hindwing: ocelli placed on a ground of similar colour to the rest of the wing and not on a pale area as in *L. jalaurida*, otherwise similar. *Upperside:* forewing: similar to *L. jalaurida*, but ocelli in interspaces 4 and 5, merely indicated by white specks; that in interspace 6 wanting in this respect, resembling *L. moelleri*. Hindwing: very similar to *L. jalaurida*, but basal line wanting; the sub-basal line not well defined and distinctly violaceous; the discal transverse band duller and much broader; ocellus in interspace 4 equal in size to those in interspaces 5 and 6 and not smaller as in *L. jalaurida*.

Female. *Upperside*: similar to male, but wanting the sexual brand on forewing: *Underside*: the ground colour tinged with ochraceous; otherwise similar.

Expanse: ♂ ♂ 2·18″—2·3″; ♀ ♀ 2·26″—2·5″.

A large number of males and a fair series of females taken on Kabru Peak 8,400 feet, in June, July and August. The females are very much rarer than the males.

BLANAIDA ARMANDII, Oberthur.

Satyrus armandii, Oberthur, Et. Ent. ii, p. 26, t. 11·5 ♂ (1876).
Neope khasiana, Moore, Trans. Ent. Soc., 1881, p. 306.
Neope khasiana, de Nicèville, Butt. Ind. i., p. 172.
Neope bhadra khasiana, Seitz, Macrolepidoptera of the World, vol. X, p. 325, 1911.
Lethe khasiana, Tytler, J. B. N. H. S., vol. xxi, p. 53.
Blanaida bhadra = *khasiana*, Evans, J. B. N. H. S., vol. xxi, p. 566.

There has hitherto been some confusion as regards *Blanaida khasiana*, Moore, which has been considered by some authors to be a separate species and by others merely a seasonal form of *B. bhadra*. It is however undoubtedly the *dry-season form* of *B. armandii*, which is the *wet-season*

form. Elwes was right when he considered *khasiana* to be a synonym of *armandii*, although he did not obtain the two seasonal forms from the same locality, he obtained two specimens of the *d. s. f.* = *khasiana* from the Naga Hills and a single *w. s. f.* = *armandii* from Bernardmyo, Burma, taken by Doherty. These according to Mr. Elwes only differed from one another in the colour of the hindwing and agreed exactly with typical *armandii* from China in Leech's collection, in which both forms from the same locality were represented.

On the *upperside* the wet-season form has all the markings uniformly pale yellow and the ground colour of the outer half of the hindwing is concolorous with the basal half; whereas in the dry-season form it is nearly entirely bright yellow. On the forewing of the dry-season form the spot beyond the cell in interspace 3 and the apical spots have a tendency to become white, the former in the male being small and narrowly oval in shape, whereas in the wet-season form it is much rounder and larger. *Underside:* the dry-season form has all the white markings broader and on the hindwing the outer half is ochraceous, whereas in the wet-season form it is pure light brown. The dry-season forms of *armandii* and *bhadra* are somewhat alike above, but below the markings are very different. Both seasonal forms of *armandii* can at once be distinguished from those of *bhadra* by the characteristic markings in the cell on the *underside* of the forewing; in *bhadra* the central pale band in the cell is *more or less straight*, whereas in *armandii* it is *sharply bent back* at its middle *at right angles* to base of vein 2. Again in *armandii* the ground colour underneath is pure brown, whereas in *bhadra* it is more or less washed with lilac.

Rare in Manipur where only a few specimens of the wet-season form were obtained below Kabru Peak at about 7,500 feet in May. Fairly common in the Naga Hills where numerous specimens of the wet-season form were obtained at Jakama, Kohima, Takabama and Kirbari at 6,000-7,500 feet during August and September. In September the dry-season form emerges and eleven males were taken during that month at Kirbari. A single fresh *dry-season female* was obtained at the same place in *June*. There are therefore two broods for certain: (1) a summer brood of the wet-season form flying from May to September, an occasional worn specimen struggling on till October; (2) an autumn brood of the dry-season form emerging in September and probably flying into October and November. The occurrence of the *dry-season* female taken in *June* is difficult to explain. The females are exceedingly rare, and only three were obtained.

Mycalesis adamsonii, Watson.

The dry-season form only appears to have been described. Both Watson and Bingham mention that there are five ocelli on the forewing underneath. In the numerous specimens of the *d. s. f.* that I have examined, I have only come across one with all five complete, the ocellus in interspace 3 being generally wanting. The ocelli on the hindwing are not always perfectly formed, the inner ones being often merely indicated by white specks.

The *wet-season form* differs considerably on the *underside*. The outer pale area is not nearly so conspicuous and is washed with lilac brown. The forewing has three perfect ocelli in interspaces 2, 5 and 6, those in interspaces 3 and 4 being completely wanting. On the hindwing all seven ocelli are perfectly formed and larger.

This species has hitherto been considered to be very rare, but it is common in the Manipur Valley, at the foot of the Range Hills, where I took numerous specimens of both seasonal forms. In other parts of Manipur it is much rarer and only a few specimens were occasionally obtained at Kanglatombi

at the extreme northern extremity of the valley and at Sebong on the Burma border.

The *d. s. f.* flies in March and April and again in November, and the *w. s. f.* from June to November.

MYCALESIS ALBOFASCIATA, n. sp. (Pl. II, Fig. 14 ♂).

Wet-season form: Male: *upperside*: dull brown. Forewing with a large ocellus in interspace 2 almost reaching the middle of interspaces 1 and 3; a smaller one in interspace 5, both black with white centres and outer fulvous rings. A glandular patch of raised scales at the middle of vein 1, partially covered by a pencil of long black hairs on either side of that vein. Hindwing plain brown; ocelli on underside sometimes faintly showing through. A glandular patch of scales near the base of vein 7, overlapped by a tuft of whitish hairs originating near the base of the cell. *Underside*: pale yellowish-grey-brown. Both wings: a double sub-basal rather indistinct brown line crossing the middle of the cell of the forewing and continued across the hindwing as far as vein 1, as a single irregular line; a narrow whitish postdiscal band inwardly well defined and bordered by dark brown and outwardly diffuse; a terminal and sub-terminal pale brown line, the latter being very sinuous. Forewing with a glandular patch of dark scales on a nacreous area near base of vein 1; ocelli as on upperside but very much smaller. Hindwing: seven rather small ocelli; the one in interspace 2, the largest those in interspaces 5 and 6 minute.

Female: very similar to the male but larger. Ocelli on *upper* forewing larger than in the male. Hindwing: *upperside* with one or two ocelli generally present and well-defined. *Underside*: similar to male.

Dry-season form: *upperside*: similar to the wet-season form. *Underside*: basal two-thirds, rather darker than outer third; all the ocelli much smaller and indistinct.

Expanse: ♂ ♂ 1·92″—2·12″; ♀ ♀ 2·15″—2·25″.

This species which belongs to the *Gareris* group is closely allied to *M. sanatana* from which it can however be easily distinguished by the following differences:—

(1) Ocelli on *upperside* larger.
(2) *Underside*: pale yellowish-brown and not dark-brown as in *sanatana*.
(3) *Underside*: postdiscal band not tinged with violet.
(4) *Upperside, h. w.*: the basal tuft of hairs whitish; in *sanatana* it is yellowish-brown.

The genitalia also differ considerably—

(1) The clasps are longer and somewhat thinner.
(2) The hooks are much longer.
(3) The tegumen is not so stout and ends in a much longer and narrower hook.

There are two specimens of this form from the Naga Hills, in the British Museum over the label of *M. sanatana*.

M. sanatana and *M. albofasciata* do not fly together; the former is found from the foot of the hills up to 5,000 feet and the latter from 6,000 feet to 8,000 feet.

It is common in the Naga Hills. Four *d. s. f.* males were obtained at Phesima in April and many west-season forms of both sexes at Phesima, Kohima, Takabama and in the Zulla Valley from July to October. It also occurs at Mao, Manipur, on the Naga Hills border.

MYCALESIS EVANSII, n. sp. (Pl. I, Fig. 8, ♂; Fig. 9, ♀).

Wet-season form. Male: *Upperside*. dull brown. Forewing with a large black ocellus, with white centre and an outer fulvous ring, in interspace 2

extending into interspaces 1 and 3; a similar very small preapical ocellus sometimes present; the pale postdiscal band of underside faintly indicated. Hindwing: uniformly brown, the ocelli on underside sometimes faintly showing through in interspaces 1, 2 and 3. *Underside* paler-brown. Both wings: a sub-basal dark line; a postdiscal yellowish-white broad band inwardly defined with dark-brown; a subterminal and anteciliary dark line, the ground colour on either side of the first being suffused with violet and between the latter two with yellow. Forewing with a large black ocellus, white centred and fulvous ringed, in interspace 2 extending into interspaces 1 and 2; a similar but smaller ocellus in interspace 5; sometimes two minute ocelli in interspaces 3 and 4 attached to those in 2 and 5. Hindwing with 7 ocelli; that in interspace 2 the largest; that in interspace 6 rather smaller; that in interspace 3 and the upper one in interspace 1 smaller and subequal; those in interspaces 5 and 6 and the lower one in interspace 1 minute; all the ocelli as in forewing black with white centres and outer fulvous rings and nearly in a straight line. ♂ mark on *underside* of forewing *not visible* on the nacreous area. A basal tuft of yellowish-white hairs on upper hindwing covering a glandular patch of dark brown specialized scales.

The *female* only differs from the male in the *upperside* being paler and in the ocellus on the forewing being larger.

The *dry-season form* differs from the *wet-season form* in having on the upperside one small preapical ocellus on the forewing generally present and two ocelli in interspaces 2 and 3 of the hindwing occasionally present in the male, nearly always so in the female. *Underside*: All the ocelli smaller: those in interspaces 3 and 4 of the forewing always present and separate and never touching those in interspaces 2 and 5 as in the *w. s. f.* when present. Terminal and sub-terminal lines narrower and paler; subterminal area paler and yellower.

Expanse: ♂ ♂ 1·7″—1·9″; ♀ ♀ 1·93″—2·12.″

This species which belongs to the *Calysisme* group is common in the Manipur Valley where numerous specimens of the *d. s. f.* were taken in April. The *w. s. f.* emerges in June when it is common and flies till October becoming scarcer as the season advances. A few specimens were taken at the extreme northern end of the valley at 4,000 feet, where the road crosses over the watershed between the Imphal and Barak Rivers. All the other specimens were taken in Imphal itself, mostly in thick scrub jungle.

MYCALESIS MISENUS, de Nicéville.

The *wet-season form* only of this species appears to have been recorded. Mr. de Nicéville figured a form taken in April and May, *i.e., the dry-season*, which agreed with *wet-season forms* and he was of the opinion that only *one* form of this species existed. The *dry-season form*, however, is quite different and differs from the wet-season form just as the *d. s. f.* of *M. nicotia* (= *langi* de N.) does from its *w. s. f.*, *i.e.*, in having all the ocelli on the underside much reduced in size. The sub-terminal area on which these ocelli are placed is also conspicuously paler. On the upperside forewing the sub-terminal area is also somewhat paler especially so in females.

Eleven ♂ ♂ and six ♀ ♀ of the *d. s. f.* were obtained near Sebong, Manipur, on the Burma border, at low elevations in March and April; and a single female during the latter month on the Lengba River, Cachar Road, Manipur; a single female of the *w. s. f.* was also obtained at the same place in July.

I believe this species has hitherto not been recorded further east than the Khasi Hills.

MYCALESIS LEPCHA KOHIMENSIS n. sp.

The form of *lepcha* occurring in the Naga Hills and Manipur is sufficiently distinct from the typical form to be worth separating, and I propose the above name for it. The *w. s. f.* differs in the following respects; the *d. s. f.* is almost identical: —

(1) *Upperside*: white band more distinct, intermediate between typical *lepcha* and *M. malsara*.
(2) *Underside*: ground colour pure brown with no tinge of red.
(3) Ocelli on *underside* of forewing in a line with the exception of the apical one which is bent inwards; in *lepcha* the ocelli in interspaces 3 and 4 are *bent inwards*.
(4) Discal band on *underside* broader, especially near the costa of the forewing, whereas in typical *lepcha* it is very narrow.
(5) Cilia *grey* or *whitish*; conspicuously so in males. In typical *lepcha* they are *brown*.

It is worthy of note that in the *d. s. f.* the *cilia* are *brown*.

Fairly common in Manipur and the Naga Hills at 4,500 feet and upwards during the rains. In the spring the *d. s. f.* flies at about 2,000 feet.

There has been some confusion about the three closely allied forms—*M. malsara*, Moore, *M. lepcha*, Moore, and *M. watsoni*, Evans. *M. malsara* and *M. lepcha* have been considered by some authors as representing different species and by others as races of one another. *M. watsoni* has only recently been separated and was placed by Evans as a race of *M. lepcha*. Watson probably took all three forms in the Chin Hills but could find no constant character by which to separate *M. malsara* from *M. lepcha* and recorded both forms under the name of *M. malsara* (J. B. N. H. Soc., vol. x., p. 642). All three forms occur in Manipur and in the Naga Hills. In the rains *M. lepcha kohimensis* flies at 4,500—7,000 feet, but descends in the dry weather to 2,000 feet; *M. malsara* and *M. watsoni* fly from the foot of the hills up to about 3,000 feet.

I have no doubt whatever that all three forms are perfectly distinct and good species.

In closely allied forms, where the facies are somewhat similar, the safest guide is an examination of the genitalia. Fortunately the genitalia of these three forms are all very distinct from one another.

M. malsara has the apical half of the clasp rather stout and the apex square and coarsely serrated. Hooks short and stout.

M. watsoni has the apical half of the clasp also rather stout, but the apex is conspicuously hollowed out in the middle forming two rounded projections on either side, and finely serrated. Hooks longer and thinner.

M. lepcha kohimensis has the apical half of the clasp longer and much narrower; the apex rounded and very finely serrated. Hooks long and thin as in *M. watsoni*. The tegumen in all three forms also varies in shape slightly.

In the few specimens of typical *M. lepcha* from the N. W. Himalayas that I have examined the apex of the clasp appears slightly squarer, but otherwise there is no difference in the genitalia and there is no doubt that the form *kohimensis* is a race of *lepcha*.

MYCALESIS MNASICLES PERNA, Fruhst.

A male and three females taken near Sebong, Manipur, in November and April. I believe this species has previously been only recorded from S. Burma and Tenasserim and from the Salwin River, Upper Burma.

MYCALESIS MYSTES, de N.

A large series of males and females taken near Sebong, Manipur, in March and April. It appears to be very local.

ELYMNIAS PEALII, W. M.

A few specimens of both sexes of this rare butterfly were obtained on the Irang River, Western Manipur Hills, and at Sebong, Manipur Hills, in March and April, and again in September and October. A pair was obtained at Nichuguard, Naga Hills, in March, and a male at the same place in April. This species has hitherto only been recorded from Upper Assam.

ELYMNIAS PENANGA CHELENSIS, de N.

A few specimens were obtained on the Irang River, Western Manipur Hills, in February and in October.

THAURIA ALIRIS INTERMEDIA, Crowley.

A large series of both sexes of this beautiful butterfly was obtained at Sebong, at the foot of the Eastern Manipur Hills, in March and April and a few damaged specimens in May.

STICOPHTHALMA NOURMAHAL, Westwood.

A large series of both sexes was obtained at Kirbari, Naga Hills, at 6,000 feet during July, August and September; during the latter month, however, most of the specimens were worn and damaged. The ♀♀ remain in good condition much longer than the ♂♂ which soon knock themselves to pieces flying up and down dense shady bamboo-clad nullahs. A few specimens were also taken at Takabama, 28 miles east of Kohima, in August.

Although not rare, it appears to be extremely local.

This species has hitherto only been recorded from Sikkim, where it is extremely rare.

STICOPHTHALMA SPARTA, de N.

Several males and two females, possibly dry-season forms, were obtained by Capt. Evans and my Native collectors at Sebong, Eastern Manipur Hills, from the end of April to the beginning of June.

The type of *S. sparta* is in the de Nicéville collection in the Indian Museum, Calcutta, where I had an opportunity of examining it. The original figure in the J. A. S. B., vol. 43, is very good excepting that on the upperside the apical area of the forewing is not pale enough. The type is either *aberrant* on an *extreme wet-season form*. Mr. de Nicéville bought it from a Telegraph Signaller employed at Manipur, and the exact locality and date of capture are not known.

The males taken by Capt. Evans and my collectors are somewhat larger than the type and differ from it in the following respects :—

(*a*) Forewing rather more pointed at apex.

(*b*) *Upperside*: the pale area on the outer half of the forewing rather paler and more extensive.

(*c*) Terminal and sub-terminal markings on both wings much reduced.

(*d*) The ground colour of the terminal area on hindwing slightly paler.

(*e*) The hastate markings on hindwing quite clear and distinct as in *S. louisa*.

(*f*) *Underside*: ground colour much paler, of a biscuit colour and not so reddish.

(*g*) The ocelli on both wings not so well developed.

The *female* is very similar to the *male* on the *upperside*, but the outer pale area on forewing is much paler and almost white; the hastate markings on both wings are heavier, apprcaching the type in this respect.

Underside: Both wings: markings similar to the male, but the ground colour is greenish as in *S. suffusa* ♀. Mr. de Nicéville in his original description states: "In true *S. howqua* and its named variety the outer discal line and the submarginal band on both wings are half the distance apart that they are in *S. sparta*, and they have six and sometimes seven ocelli on the forewing, while *S. sparta* has only five."

Mr. South describes a form of *S. howqua* (J. B. N. H. Soc., Vol. XXII, p. 352), taken by Captain Bailey in the Mishmi Hills, as being intermediate between typical examples (?) from India (as far as I know the type of *Sparta* has hitherto been unique) and var. *suffusa*, Leech, from Western China.

Captain Porter has sent me a single male of a form of *Sticophthalma* taken by him on the Dihang River, Abor Hills, in July, which is identical in all respects with Manipur specimens. The Dihang River is not so very far from where Captain Bailey obtained his specimen on the Lohit River in the Mishmi Hills, and therefore it is highly probable that the two specimens belong to the same race. If this is so, the form described by Mr. South must be identical with specimens from Manipur, which are undoubtedly *S. sparta*; for it is highly improbable that *two closely allied forms* of a *Sticophthalma* should be found in Manipur. *S. sparta* appears to be closely allied to *S. louisa* and will probably prove to be a northern race of that species and not a race of *S. howqua* as considered by some authors.

Æmona amathusia, Hewitson.

Not uncommon in Manipur where many specimens of both sexes were taken in May and June and again in September and October at Saitu at the northern end of the Manipur Valley at about 4,000 feet, and on the Burma Road near Sebong. The butterfly, although not rare, appears to be extremely local and is found in dense shady nullahs. There are two broods in the year emerging in May and September, which do not differ from one another. *Æmona pealii*, Wood-mason, cannot, therefore, be the wet-season form of *amathusia* as considered by some authors. It may be a casual variety or a local race confined to the northern end of the Naga Hills. Sibsagar, the locality given for it, is an extremely unlikely place for it to be found, as it is in the plains. *Æ. pealii* was probably taken in the Naga Hills which adjoins the Sibsagar District.

Enispe euthymius, Doubleday.

There are three well-marked forms of this species occurring in Manipur and the Naga Hills.

(1) Typical *euthymius* of which four specimens were obtained on the Lengba and Irang Rivers in the Western Manipur Hills; three males in April and one in July, *i.e.*, in both the *dry* and *wet* seasons.

(2) Variety *tessellata*, Moore, of which three males were taken at Nichuguard, Naga Hills, in March and April, and many males and five females near Sebong on the Burma Road, Manipur, from March to July and again in November, *i.e.*, during both *dry* and *wet* seasons.

(3) A very dark form, which I propose calling *melæna*, of which I obtained two males at Nichuguard in the Naga Hills in June and October and two males on the Lengba River, Manipur, in March and April, *i.e.*, in both the *dry* and *wet* seasons. The above three forms are very distinct, and none of the specimens before me intergrade.

Typical euthymius is the palest form, the male of which lacks the straight black bar near the base of interspaces 2 and 3.

Var. tessellata ♂ is darker with heavier black markings and with a straight black bar near the base of interspace 2 and 3 on upper forewing; the basal half of both wings is also somewhat darker than the outer half.

Var. melæna is still a very much darker form; the ground colour is a richer red on the outer half of both wings and a deep red-brown on basal half. The black markings are very much heavier, forming on the forewing a broad black terminal band on which is a row of quadrate spots of the ground colour not touching one another. The black band near base of interspaces 2 and 3 as in *tessellata*, but broader and carried into the middle of interspace 1. *Underneath* also rather darker.

From the dates of capture given, it will be seen that all three forms occur *both in the dry* and *wet seasons* and, therefore, the intensity of the markings is not due to seasonal causes.

Discophora deo, de N.

A single male taken at Nichuguard, Naga Hills, in April.

(To be continued.)